REMARKS

Claims 1-26, 29-32, 35, and 36 are now pending in the present application, Claims 1, 3, 6, 7, 9, 24, 25, and 35 having been amended, Claims 27, 28, 33, and 34 having been cancelled without prejudice or disclaimer, and new Claim 36 having been added.

Applicant would initially like to thank Examiner Rosenburg for the courteous telephonic interview extended to Applicant's counsel, Michael Guiliana, on February 6, 2004 during which the prior art of record was discussed. More particularly, Applicant's counsel pointed out that all of the vehicular prior art of record is directed to four-wheeled vehicles. Additionally, Applicant's counsel pointed out that a two-wheeled vehicle, such as a motorcycle, turns in a fundamentally different way than a four-wheeled vehicle. This is recognized in the Blosh reference, a state of the art U.S. patent issuing in 2002, where it states that "[i]n motorcycles, the avoidance of rollovers during acceleration is entirely dependent on the skill of the driver." Applicant's counsel pointed out that this statement teaches away from the combinations used in rejecting the pending claims.

Although agreement was not reached during the interview, Applicant has amended Claim 1 along the lines discussed during the interview, in order to expedite prosecution of the present application. On the basis of the interview and in response to the Office Action mailed August 27, 2003, Applicant respectfully requests the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following comments

The Objections to the Specification Have Been Addressed

The disclosure is objected due to informalities, the Examiner maintaining that the reference number 78 was incorrectly to identify the "vibration detection circuit" and the "capacitor circuit". The Applicant has amended paragraph [0107] to include the reference number 72 to identify the "vibration detection circuit" and the reference number 74 to identify the "capacitor circuit". The correct the objected informalities and include the reference numbers 72 and 74. Applicant respectfully requests the Examiner to allow the amended specification.

The Outstanding Objections Claim 24 Have Been Addressed

Claim 24 is objected due to informalities, the Examiner maintaining that the acronym EEPROM should be written in its entirety the first time it in presented in the claims. Claim 24 has been amended to correct the informality and includes the description "electrically erasable

programmable read-only memory". Applicant respectfully requests the Examiner to allow the amended Claim 24.

All Pending Claims Fully Comply With 35 U.S.C. § 112

Claims 3 and 6 stand rejected under 35 U.S.C. § 112 second paragraph, the Examiner maintaining that the language therein is indefinite as filed. In particular, the Examiner stated that there is insufficient antecedent basis for the following limitation: "said output". Applicant has amended the Claims 1, 3, and 6 to be consistent in identifying the signal output from the accelerometer as an "output signal." Applicant submits that this is not a narrowing amendment. Rather, Applicant has merely changed the generic name of the "signal" to allow a reader to more easily read the claims, and thus equivalents of the originally recited "signal" are also equivalents of the now-recited "output signal." Additionally, Applicants submit that the claims fully comply with the requirements of 35 U.S.C. § 112.

Applicant has also amended Claims 7 and 9 in a manner similar to the above-noted changes to Claims 1, 3, and 6, for the same reasons.

Claim 1

Claim 1 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Sasaki in view of Dodd and in further view of Fritz. Applicant respectfully disagrees with the basis for the rejection. However, Applicant has amended Claim 1 to expedite prosecution of the present application. Applicant expressly reserves the right to further prosecute the original version of Claim 1 through continuation practice.

Sasaki is directed to a safety system for an internal combustion engine used on small construction equipment and machinery. Column 1, lines 9 -- 15. The engine includes an inclination sensor for detecting an inclination of the engine. When a predetermined angle of inclination is reached, the engine is shut off. However, nowhere does the Sasaki suggest that such a system can be developed for use on a two wheeled vehicle, such as a motorcycle, which leans significantly into turns even when on flat ground. Additionally, the Examiner noted that Sasaki does not disclose a wheeled vehicle.

Dodd et. al. discloses the use of the pendulum sensor used for disabling the engine of a garden tractor when a predetermined angle of inclination is reached. The illustrated pendulum 15

of Dodd et. al. cannot provide a proportional output signal. Rather, the pendulum 15 causes an output signal only when the predetermined angle of inclination is reached, the predetermined angle being built inherently into the design of the pendulum 15 and its supporting hardware. Additionally, nowhere does Dodd et. al. suggest that such a system can be used on a two wheeled vehicle or any type of vehicle that leans significantly into turns, even when on a flat surface, such as a motorcycle.

The Fritz reference discloses yet another system for disabling the engine of construction equipment, namely "large trucks, earth moving, and construction vehicles that may operate under severe conditions in rough terrain." Col. lines 11 -- 13. Nowhere does Fritz suggest that such a system can be used on a two wheeled vehicle, or any type of vehicle that leans significantly into turns, even when on a flat surface, such as a motorcycle.

It was the Examiner's position that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wheeled vehicle of Sasaki with the teachings of Dodd et. al. to provide a tilt actuated safety device along with the teachings of Fritz to provide a housing for the tilt sensor. Applicant submits that no obvious combination of the references results in the invention recited in Claim 1. More specifically, no obvious combination of the references would result in a motorcycle having an accelerometer and a control unit adapted to compare the output of the accelerometer to a threshold range and to decrease the output of the engine if the output is outside the threshold range.

In contrast, Claim 1 now recites, along with other features, "an accelerometer configured to detect acceleration in at least two distinct directions relative to the frame, the accelerometer being mounted within the outer housing and electrically communicating with the control unit, the accelerometer adapted to output an output signal that varies with a leaning angle of the motorcycle when turning, said control unit adapted to compare said output signal to a threshold signal range said control unit further adapted to decrease the output of said motive member if said output signal is outside said threshold signal range."

This distinction is important because, as discussed during the interview, a motorcycle behaves fundamentally differently during turning as compared to the vehicles and machinery described in the applied prior art references. For example, as discussed during the interview, all

of the vehicles specifically described in the applied prior art references are four wheeled vehicles. Such vehicles are inherently stable in that they remain upright when at rest. Additionally, during turning, such vehicles will generate turning forces causing the vehicle to lean toward an outside of the turn. Additionally, such vehicles follow the terrain of the surface over which they travel, i.e., if the vehicle is traveling on a surface that is slanted, the vehicle will travel in a slanted orientation. These types of vehicles are fundamentally different from motorcycles.

As discussed during the interview, a motorcycle, when turning, will normally lean inwardly toward the inside of the turn. Additionally, the vectors of gravitational and centrifugal forces acting on a motorcycle are oriented differently with respect to the frame of the motorcycle compared the orientation of such vectors on a four wheeled vehicle. As such, one of ordinary skill in the art would not have expected to success in combining the devices of the applied prior art with a motorcycle. This position is reinforced by the express statement in the Blosch reference where it indicates that "[i]n motorcycles, the avoidance of rollovers during acceleration is entirely dependent on the driving skill of the driver." Column 1, lines 26 -- 28.

Applicant submits that Blosch clearly teaches away from the combination suggested by the Examiner. This express teaching away along with the clear fundamental differences in the dynamics associated with two wheeled vehicles such as a motorcycle and the four wheeled vehicles described in the applied references shows that one of ordinary skill art would not be motivated to combine the teachings of the cited references with a motorcycle.

Applicant therefore submits that Claim 1 clearly and non-obviously defines over the applied references. Further, applicant submits that Claims 2 and 3 also define over the applied references, not only because they depend from Claim 1, but also on their own merit.

Claim 4

Claim 4 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Blosch in view of Fritz. Applicant has fully reviewed the references and respectfully disagrees with the basis of the rejection. Applicant submits that that the combination of these references does not disclose each and every limitation recited by Claim 4.

Claim 4 recites that the accelerometer is adapted to output a signal that varies with the rate of forward deceleration and the signal is compared to a collision threshold. Claim 4 further

recites that the motive member is disabled if the signal exceeds the collision threshold signal. None of the applied references disclose these limitations, or others, recited by Claim 4. For example, Blosch does not disclose that the acceleration signal varies with the rate of acceleration and the disclosed threshold is not a collision threshold. Furthermore, Blosch does not disclose disabling the motive member if a collision threshold is exceeded. These limitations also are not found in Fritz. Accordingly, the applied combination of references, even when taken together, does not teach or suggest each and every limitation recited by Claim 4. Reconsideration of the rejection is respectfully requested.

Claims 5 and 6 depend from Claim 4 and are therefore allowable for at least the same reasons as Claim 4. Reconsideration of the rejection of Claims 5 and 6 is therefore respectfully requested.

Claim 7

Claim 7 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Blosch in view of Fritz. Applicant has fully reviewed the references and respectfully disagrees with the basis of the rejection. Applicant has however amended Claim 7 to expedite an allowance of the claim. However, Applicant expressly reserves the right to further prosecutre the original version of Claim 7 through continuation practice.

Applicant has amended Claim 7 to recite a rear-wheel drive vehicle, a predetermined vehicle speed, and a predetermined throttle position range. The limitations of the rear wheel drive vehicle, the predetermined vehicle speed, and the predetermined throttle position range are not found in any of the cited references. Applicant respectfully requests the Examiner to allow Claim 7 based on the amendment and that now the combination of these references does not disclose each and every limitation recited by Claim 7.

Claims 8 and 9 depend from Claim 7 and are therefore allowable for at least the same reasons as Claim 7. Reconsideration of the rejection of Claims 8 and 9 is therefore respectfully requested.

Claim 13

Claim 13 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Sasaki in view of Saito et al. Applicant has fully reviewed the references and respectfully disagrees with the basis

of the rejection. Applicant concluding that the combination of these references does not disclose each and every limitation recited by Claim 13.

Claim 13 recites controlling operations of a motive member and a fuel pump during an accident using a semiconductor accelerometer. None of the applied references disclose these limitations recited by Claim 13. For example, Sasaki does not disclose disabling a fuel pump according to a value of semiconductor accelerometer. Furthermore, Saito does not disclose controlling the fuel pump or disabling the motive member if a threshold is exceeded. Accordingly, the applied combination of references, even when taken together, does not teach or suggest each and every limitation recited by Claim 13. There would be no motivation to combine the accelerometer of the occupant restraint system taught by Saito et al. with disabling an engine taught by Sasaki. Therefore, there would be no motivation to combine the references to suggest each and every limitation of the Claim 13. Reconsideration of the rejection is respectfully requested.

Claims 14-24 depend from Claim 13 and are therefore allowable for at least the same reasons as Claim 13. Reconsideration of the rejection of Claims 14-24 is therefore respectfully requested.

Claims 28 and 35

Claims 28 and 35 are objected to as being dependent on a rejected base claim, the Examiner indicated that Claims 28 and 35 would be allowed in rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 25 has been amended to incorporate Claims 27 and 28. Claim 35 has been amended to include incorporate Claim 25, 33, and 34. Thus, Applicant respectfully requests the Examiner to allow Claims 28 and 35.

Claims 26 and 29-32 depend from the amended Claim 25 and are therefore allowable for at least the same reasons as Claim 25. Reconsideration of the rejection of Claims 26 and 29-32 is therefore respectfully requested.

CONCLUSION

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicant's attorney, Michael A. Guiliana at (949) 721-6384 (direct line), in order to resolve such issue promptly.

Respectfully submitted,

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By: _____

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